

as that quoted above. It is a long time, since 1876, for my species to have remained unknown to one of the chief workers at the lepidopterous fauna of the dark continent; in twenty-seven years surely he should have gained some idea of the identity of a species the type of which he might have examined at the Museum on more than one fairly long visit to London.

LI. — *Notes on Phasmidæ in the Collection of the British Museum (Natural History), South Kensington, with Descriptions of new Genera and Species.*—No. II. By W. F. KIRBY, F.L.S., F.E.S.

Subfam. II. *BACTRICINÆ*.

I am obliged to form a new subfamily for my genus *Bactricia* (= *Scaphegyna*, Karsch), which agrees with the *Lonchodinæ* in its long antennæ and in the short median segment, but differs entirely in the large incurved cerci of the male and in the long operculum of the female.

The two known species are from Africa, and I now add one from Singapore. (By some error the name of this subfamily has been given as *Bacteriina* in the list on p. 372 *antea*.)

Genus *BACTRICIA*, Kirb.

Bactricia Ridleyi, sp. n.

Male.—Greenish brown; head short, narrowed behind, and with two compressed obtuse horns between the eyes; space between the horns and the antennæ, sides of head, (probably) the propectus, and a lateral streak below the median segment white. Antennæ and legs long and slender, the latter nearly straight, and unarmed except for a sharp, flattened, curved tooth near the base of the middle femora beneath. Median segment half as long again as broad; abdominal segments 2–6 about three times as long as the median segment, the seventh about twice as long; segments 8 and 9 about as long, tenth rather shorter, concave at the extremity; cerci compressed, almost spatulate, incurved and crossed; operculum extending as far as the ninth abdominal segment.

Dimensions.

	mm.
Long. corporis	125
„ capitis	4
„ pronoti	5
„ mesonoti	28
„ metanoti, cum segm. med.	23
„ segm. med.	3½
„ fem. ant.	40
„ „ med.	32
„ „ post.	41

Hab. Singapore (*Ridley*).

Allied to *B. trophinus*, Westw., from Natal, but in the male of that species the horns are much more slender and pointed, and the middle femora are unarmed.

Subfam. III. *BACILLINÆ*.

Clitumnidæ et *Bacillidæ*, Brunner.

The very short median segment and the large incurved and frequently crossing cerci of the males will provisionally bring together a series of apterous Old-World species which agree with the American *Diaphomerinæ* in most respects, but differ in the shortness of their antennæ. With Brunner's *Clitumnidæ* I associate his *Bacillidæ*, considering them too closely related to *Phthoa* &c. to be separated from them, notwithstanding the more or less distinct excavation at the end of the tibiæ, which will, perhaps, prove to be a less important character than has been supposed. It is not nearly so distinctly marked in some genera of *Phasmodæ* as in others.

Another reason for removing the *Clitumnidæ* from the position in which they were placed by Brunner is that they come between the *Necrosiinae* and *Acrophyllinae*, winged Old-World subfamilies which agree in the shape of the median segment.

Subfam. IV. *DIAPHOMERINÆ*.

Bacunculidæ, pt., Brunner.

I employ this name for a series of American genera allied to the *Lonchodinae* by the very short and well-marked median segment and to the *Bacillinae* by the large and generally incurved cerci of the males. *Bacunculus* and the genera following it in Brunner's arrangement appear to me to be more closely related to the *Bacteriinae*.

Genus CAULONIA, Stål.

|| *Ceroys*, Sauss. (nec Serv.).

A series of utterly discordant species have been placed in this genus, the type of which is *Caulonia bifolia*, Stål, allied to *Ceroys rhabdota*, Westw.; but I have not sufficient material available to justify me in attempting to break it into natural genera. The genera including spiny Phasmidæ are in greater need of revision than any others of the family. However, judging by the description, I think that *Purobrimus*, Scudd., is probably allied to *Caulonia*, and that *Ceroys laciniatus*, Westw., may be referable to it.

Subfam. V. BACTERIINÆ.

Bacunculidæ, pt., and *Bacteridæ*, pt., Brunner.

I employ this name provisionally for a series of apterous American genera in which the median segment is either as long as the metanotum or else, especially in the males, so closely fused with it that no division is visible. The genera *Bacunculus*, Burm., and *Dyme*, *Calynda*, *Bostra*, and *Clonistria* of Stål, included by Brunner in his *Bacunculidæ*, will fall into the present subfamily, and also the following genera, included by Brunner in his *Bacteridæ*:—*Phibalosoma*, Gray; *Phanocles*, Stål; and *Bacteria*, Latr. I include *Phibalosoma* (and some allied American genera not mentioned by Brunner) in this subfamily, although they have winged males, because they agree too closely with *Phanocles* and *Bacteria* to be referred to a distinct family. I also include the genera *Bactridium*, Sauss., and *Abrachia*, Kirb., though they are not very closely allied to the other genera; but I cannot find a better place for them. *Abrachia* has no triangular spaces at the end of the tibiæ beneath, as I have erroneously stated, but a very large one at the end of the middle femora, the carinæ of which project at the end on each side in a strong spine.

Genus TERSOMIA, nov.

Antennæ only one third of the length of the front femora, 23-jointed; scape flattened, twice as long as broad; second joint rather longer than broad, flattened, narrower than the scape, the rest slender, linear; third joint the longest, three times as long as broad, the fourth scarcely longer than broad, the rest gradually increasing in length to beyond the middle and then gradually shortening to the extremity. Head

considerably longer than broad, narrowed behind, with a pair of short, stout, very obtuse horns on the vertex between the eyes. Legs and body long, slender, smooth, legs nearly straight; tibiæ carinated to the extremities, terminal spines of the front femora and outer side of the middle femora very slightly marked, those on the inner side of the middle femora and on both sides of the hind femora more conspicuous; first joint of tarsi at least as long as all the rest together; median segment fused with the metanotum, longer than broad; segments 2-7 of the abdomen from two to four times longer than broad; three terminal segments slightly longer than broad, carinated above, terminating in a very long operculum, trifid at the extremity.

Appears to be allied to *Clonistria*, Stål, but with much shorter antennæ and very long operculum.

Tersomia brasiliensis, sp. n.

Female.—Light brown, legs pubescent; meso- and metanotum above with a double yellowish line, head and pronotum less distinctly streaked and dotted with yellowish.

Dimensions.

	mm.
Long. corp.....	151
„ antennarum.....	16
„ capitis.....	5
„ pronoti.....	4½
„ mesonoti.....	33
„ metanoti, cum segm. med.	26
„ operculi.....	17
„ fem. ant.....	43
„ „ med.....	31
„ „ post.....	32

Hab. Iguarassu, Brazil (*Ridley*).

Subfam. VI. *PHYGANISTRINÆ*.

Lonchodidæ, pt., et *Bacteridæ*, pt., Brunner.

I propose this subfamily to include the Eastern genera *Phryganistria*, *Sadyattes*, and *Pharnacia* of Stål, and *Tirachoides* of Brunner. The males are winged, except in *Phryganistria*. *Phryganistria* is placed by Brunner in the *Lonchodidæ*, but its real affinities appear to be with the other genera, which he places in his *Bacteridæ*. They agree with this group, as I have restricted it, in the form of the median segment, and I think it best to treat them as an independent subfamily.

With these may perhaps be associated some of the species placed by Westwood in his genus *Lopaphus*, which, except for the possession of wings, much resemble *Lonchodinae*.

Genus LOPAPHUS, Westw.

Lopaphus, Westw. Cat. Phasm. p. 99 (1859); Wood-Mason, Journ. Asiatic Soc. Bengal, xlv. p. 347 (1877).

Phasma, group 15, Haan, Temminck, Verhandel., Orth. p. 125 (1842).

As Westwood's genus corresponds to De Haan's group 15, one of the four species included in that group by De Haan (*Bojei*, *brachypterum*, *Macklottii*, and *galacpterum*, H.) must be regarded as the type. But Wood-Mason (*suprà*) enumerates a series of species as belonging to *Lopaphus*, among which *brachypterum* is the only one of De Haan's included; and this consequently becomes the type.

However, the other species placed by Wood-Mason in *Lopaphus* are not congeneric, but belong to *Candaules*, Stål, and other genera. *L. brachypterus* is probably allied to the following genus.

Genus PHÆNOPHAROS, nov.

Antennæ nearly as long as the front legs and composed of a great number of joints; head with 4 or 5 tubercles behind, and about as long as the pronotum; mesonotum nearly one third of the whole length of the body; median segment very long, fully half as long as the metanotum; legs very long; front legs longest, middle legs shortest; first joint of front tarsi longer than the remaining joints together, and with a lamellated crest at the extremity; all the tibiæ with two spines towards the extremity on each lower carina; hind tibiæ with a small basal lamina beneath on the inner side; tegmina squamiform. Wings hardly as long as the median segment.

Type, *Lopaphus struthioneus*, Westw., from Singapore and Penang.

The three specimens of this genus in the Museum probably represent two species; but it will be better to wait for a longer series before differentiating them.

Subfam. VII. PALOPHINÆ.

I have no observations to make on this subfamily.

Subfam. VIII. *NECROSCIINÆ*.Genus *SOSIBIA*, Stål.*Sosibia peninsularis*, sp. n.

Female.—Brown, thickly dotted with grey; antennæ black, ringed here and there with yellowish towards the extremity; front sloping above the antennæ, this portion bordered behind by a curved row of a few small tubercles, one of which on each side is black and more conspicuous than the others. The head is covered with short black spines, arranged in about four rows on each side of the median line; the row nearest the median line on each side is more regular than the others, and terminates above the frontal depression in a single central spine; towards the margins are some black tubercles among the spines. The thorax is strongly tuberculate, and the prothorax bears a double row of black spines, slightly converging hindwards, the intermediate ones longer than the others, and in front of the mesothorax are two short spines on each side close together. The front legs are testaceous, banded with brown, and the front femora expanded and flattened; the middle and hind legs are yellowish, with the extremities of the femora and tibiæ and at least the last joint of the tarsi black. The tegmina are brown, slightly bordered with yellowish, and convex; the costal area of the wings is light brown, varied with grey, and the membranous part is brown and subhyaline. The cerci are short and very thick, especially towards the extremity.

Dimensions.

	mm.
Long. corporis	81
" capitis	7
" pronoti.....	4
" mesonoti.....	12
" metanoti, cum segm. med.	12 $\frac{1}{3}$
" fem. ant.	12 $\frac{1}{2}$
" " med.	10
" " post.	16
" tegm.	7
Exp. al.	115

This species is allied to *S. nigrispina*, Stål, and *S. curtipes*, Westw. It may be the female of *S. esacus*, Westwood, but it would be unsafe to put them together without evidence.

Hab. Penang (*Flower*).

Genus CALVISIA, Stål.

Calvisia maculata, sp. n.

Female.—Testaceous (green when alive?), varied with blackish. Head longer than broad; occiput convex, front sloping and slightly excavated as far as the base of the antennæ; a blackish band runs below the eyes obliquely upwards to the back of the head, and there is a shorter one above it running backwards from the eye, interrupted before reaching a transverse black mark at the back of the occiput. Antennæ marked with long black spots. Legs with indistinct brown bands and the tips of the femora and tibiæ and the terminal joints of the tarsi distinctly black. Thorax granulated. Prothorax with black markings on the sides and on the median line; this is interrupted on the front of the hinder lobe, where there is a curved black line on each side, before the black median line is continued. Mesothorax with the hinder two thirds suddenly raised, the raised part with a black spot and a curved black line on each side in front. Tegmina with a cone-shaped elevation in front and distinctly spotted with black, especially on the paler basal half. Costal area of wings testaceous brown, spotted with black on the hinder part, and more sparingly elsewhere; the membranous part of the wings greyish brown, scarcely hyaline. Hind femora reticulated with black beneath; first joint of the middle and hind femora about as long as the two following; front tarsi missing. Abdomen irregularly and indistinctly reticulated with black above.

Dimensions.

	mm.
Long. corporis	64
„ capitis	6
„ pronoti	5
„ mesonoti	10
„ metanoti, cum segm. med.	12
„ segmenti mediani	7
„ fem. ant.	11
„ tegm.	7
Exp. al.	100

Hab. Penang (*Flower*).

Seems to be most nearly allied to *C. maculicollis*, Westwood, but with the mesothorax simply raised behind instead of humped. In markings it greatly resembles *Aschipsasma annulipes*, Westwood, though much less heavily spotted; but its generic characters separate it at once from that species.

Genus TRIGONOPHASMA, nov.

Size rather large; head smooth, rounded and convex behind the eyes; tegmina raised and flattened laterally, thus forming a triangular hollow cone; wings much longer than broad; front femora curved at the base; mesonotum rarely more than three times as long as the pronotum.

Allied to *Mormessoides*, Brunner.

Type, *Necroscia rubescens*, Sauss.

Genus ORTHONECROSCIA, Kirb., n. n.

|| *Necroscia*, Brunner, Ann. Mus. Genova, xxxiii. p. 84 (1893), nec. Serv.

None of the species described by Serville under *Necroscia* appear to belong to the genus as restricted by Brunner to species with the front femora not curved at the base. Neither Stål nor Brunner happen to assign any type to *Necroscia*, and I therefore rename Brunner's genus, specifying *N. filum*, Westw., as the type of *Orthoneuria*, and one of Serville's most conspicuous species, *N. roseipennis*, as the type of *Necroscia*.

Orthonecrosia pulcherrima, sp. n.

Long. corp. 90, exp. al. 116 mm.

Female.—Head green, somewhat convex above, with a medial sulcation, on each side of which are three others, converging behind. A square black spot between the antennæ and a large oval spot behind on each side. Antennæ very long and slender, green at the base and afterwards black, with several white bands. Pronotum with crossing sulci before the middle; before this green, behind black. Mesonotum yellowish and slightly granulated above and green below. Abdomen greenish (colour changed?), seventh and eighth segments yellow, with a black spot at the extremity; ninth, tenth, and anal appendages almost entirely black; operculum green, as long as the abdomen. Legs green, banded with dark brown or blackish. Tegmina strongly carinated and thickly spotted with golden yellow or, near the margin, with green. Costal area subhyaline, thickly covered with partly connected golden-yellow spots, between which are four longitudinal series of blackish spots; costa bright green. The membranous part of the wing brownish hyaline, and very strongly iridescent.

Hab. Borneo.

Closely allied to *O. filum*, Westw., but much larger and more variegated in colour.

Orthonecrosia ruficeps, sp. n.

Long. corp. 38-50, exp. al. 53-65 mm.

Black; head, base of antennæ, and incisions and three terminal segments of the abdomen sealing-wax red; in the female the legs are also varied with red. Tegmina black, paler towards the extremity in the female. Wings with the costal space black or dark brown, intersected by a fusco-hyaline line extending from the base to the tip; membranous part fusco-hyaline, with brown nervures.

Hab. Solomon Islands (Guadalcanar).

A very distinct species.

Genus NECROSCIA, Serv.

Necrosia, Serv. Ins. Orth. p. 250 (1839). (Type *roseipennis*, Serv.)

Sipyloidea, Brunner, Ann. Mus. Genova, xxxiii. pp. 84, 86 (1893). (Type *sipylus*, Westw.)

Necrosia tonquinensis, sp. n.

♂.—Long. corp. 72, long. capitis et pronoti 15, exp. al. 88, lat. al. 23 mm.

♀.—Long. corp. 105, long. capitis et pronoti 22, exp. al. 115, lat. al. 30 mm.

Male.—Pale brown; head rather long, oval, and raised behind, yellow; median line of head and pronotum sulcated; head with a row of small granules between the eyes, and meeting behind them in a V, and several other symmetrical rows of small granules adjoining and on each side of the median sulcus; below these is a brown line below the eye, continued as a black carina on the sides of the prothorax and mesothorax, and forming a raised black ridge on the tegmina, which are otherwise yellowish and obtusely rounded at the extremity. Antennæ pubescent, brown, blackish towards the base and at the joints; pro- and mesothorax thickly granulated, the former sulcated and the latter slightly carinated; abdomen with a black median line, slightly raised, on several of the segments. Legs pubescent, yellowish brown, indistinctly mottled with pale brown; femora blackish towards the extremity. Costal area of wings yellowish brown, more yellowish along the costa, and with three or four long yellow spots, partly surrounded with black, on the hinder edge; the membranous part iridescent hyaline, with yellowish nervures; those at the base red.

Female.—Brown; antennæ varied with black and pale; head yellowish, the mouth-parts black in the middle and on

the sides ; head and pronotum with slender black central and lateral lines ; thorax granulated ; tegmina with a raised central carina, marked with yellow at the base before the carina and towards the extremity behind it ; costal area of wings pale brown, the nervures interrupted with blackish ; rest of wings brownish hyaline, with yellowish nervures, scarcely interrupted with darker, those towards the base distinctly red. Wings in both sexes considerably broader than the length of the head and thorax together.

Hab. Tonkin (Tan Moi), June and July (*Fruhstorfer*).

Described from three (one male and two female) specimens.

The male is very distinct, but the female is very similar to *N. sipylus*, Westw., except for the breadth and red basal nervures of the wings. I should not be surprised to find that the wings of *N. tonquinensis* were more or less flushed with red, at least at the base, in perfectly fresh specimens. It is one of the largest species of the *Necrosiinae*.

Subfam. IX. *ACROPHYLLINÆ*.

Genus *ACANTHOMIMA*, nov.

Allied to *Acanthodyta*, Sharp ; head very long ; antennæ with the basal joint very large and flattened, second annular ; flagellum very short, scarcely longer than the head ; mesonotum granulated, with from 2 to 4 small asymmetrical spines ; median segment about two fifths as long as the metanotum ; front femora curved at base and with from 4 to 6 strong serrations between the curve before the middle. Tegmina and wings rudimentary.

Type, *Anophelepis rhipheus*, Westw., from Swan River.

Genus *ARRHIDÆUS*, Stål.

Arrhideus phlyctenoides.

Marmessoidea phlyctenoides, Rehn, Proc. Acad. Nat. Sci. Philad. 1904, p. 73.

Long. corp. 48, long. mesonoti 10, lat. 4, long. fem. ant. 13, exp. al. 38 mm.

Female.—Bright green ; head large, slightly convex, twice as long as the very small pronotum ; antennæ reddish brown, with more than 30 joints ; a yellow line running from the eye to the back of the head and along the borders of the pro- and mesonotum. Pronotum with crossing sulcations, the transverse one well before the middle. Mesonotum moderately broad, finely granulated, and with a slight median carina. Legs unarmed ; femora moderately stout, nearly as

long as the tibiae and tarsi together, front femora much waved at the base. Tegmina almost quadrate, but with the angles rounded off; a black raised line towards the costa, before which the colour is yellowish. Wings rather short, costal area green, membranous area rose-coloured. Abdomen with the basal segments hardly so long as broad, but the four basal segments suddenly narrowed and laterally compressed.

Hab. Japan.

Described from four specimens, scarcely varying at all.

Genus PHASMA, Licht.

Phasma, Lichtenstein, Cat. Mus. Zool. Hamburg, iii. p. 77 (1796); Trans. Linn. Soc. Lond. vi. p. 9 (1802); Illiger, Käf. Preuss. p. 499 (1798); Fabr. Suppl. Ent. Syst. p. 186 (1798).

Lichtenstein and Fabricius enumerate many species under this name, but fix no types. Illiger, however, mentions *gigas*, Linn., and *calamus* and *rossia*, Fabr., as the types. Latreille afterwards specified the type as *rossia*; but none of the three species mentioned by Illiger can be taken as the type, for though all three species were mentioned by Lichtenstein, he applies the name *Mantis* to them, not *Phasma*. However, the first species mentioned by Lichtenstein under the name of *Phasma* is a very close ally of *gigas*, L., figured by Stoll as *gigas* ('Spectres,' pl. i. fig. 1) and described briefly by Lichtenstein under the name of *Phasma empusa*. Consequently Illiger's mention of *P. gigas* (apart from this being the first species mentioned under *Phasma* both by Illiger and Fabricius) fixes the closely allied *P. empusa* (Lichtenstein's first species) as the type.

Genus EURYCHEMA, Serv.

Eurycnema magnifica, sp. n.

Long. corp. 200, exp. al. 215, long. tegm. 46, lat. tegm. 20 mm.

Female.—Yellowish green above, more or less varied with whitish (colours probably changed); mesonotum rather long, slender, and nearly smooth, transversely banded with black beneath; tegmina yellowish green, veined below with red; membrane sea-green. Wings sea-green, the opaque costal area yellowish green, almost entirely red beneath, except on the borders, the colour slightly showing through on the upper-side. Legs strongly carinated, serrated, and spined, as usual in the genus.

Hab. (probably) New Guinea (Crowley Collection).

This splendid species is one of the largest of the winged Phasmidæ. It is allied to *E. versirubra*, Serv. (*herculeana*, Charp.), from Java, but is abundantly distinct by the longer, moreslender, and smooth mesonotum, the much longer tegmina, not marked with white above, and the longer wings, with the costal area not distinctly red at the base above, but almost entirely red below.

Eurycnema viridissima, sp. n.

Long. corp. 186–195, exp. al. 170–175, long. tegm. 38–42, lat. tegm. 20 mm.

Female.—Green; head and pronotum mostly whitish, with three green bands on the former and two on the latter; abdomen with white incisions and a slender white line on each side; pronotum paler on the sides than in the middle, smooth, or with a few small nodules. Meso- and metapectus with a double row of dark green nodules placed on transverse spots of the same colour; metapleura with a row of spines. Tegmina bright green, streaked and spotted with white; the white spaces are veined with red beneath. Wings sea-green, costal area tinged with red at the base, and sending out a broad longitudinal white streak nearly to the margin; under surface with the red colouring occupying a corresponding space to this white streak and with most of the veins red on the basal third of the wing and along the course of the pale stripe. Legs green, somewhat irregularly banded and spotted with whitish. Eggs smooth, oval, black, and shining.

Hab. Moreton Bay and North Australia.

Differs from the North-Australian *E. versifasciata*, Serv., in the much longer wings and tegmina, and in the colour of the latter, which have only one broad longitudinal streak in *E. versifasciata*.

The Museum possesses specimens of *Eurycnema* from Timor and Timor-Laut, but not in sufficiently good condition to be determined. The only described species not represented in the Museum is *E. Beauvoisi*, Serv., from Java, in which the pronotum is stout and granulated, and the tegmina and the costal area of the wings are uniform bright green.

Subfam. X. *EURYCANTHINÆ*.

The genera *Karabidion*, *Eurycantha*, and *Canachus* are placed by Brunner at the end of his Clitumnidæ, but they have so little resemblance to the other genera of that family, and so much (except in the tibiæ being carinated to the tips) to the Heteropteryginæ, that I think it better to remove them to the neighbourhood of the latter insects.

Genus EUBULIDES, Stål.

Eubulides spuria, sp. n.*Eurycantha spuria*, Westw., MS.

Long. corp. 55, long. pronoti 10, lat. 8 mm.

Male.—Pale yellowish grey, varied with reddish brown on the head above, and more or less on the sides of the body. Antennæ thick, 17-jointed, the scape and second joint paler than the rest; joints 2 and 4–6 transverse, the rest longer than broad; joints 7–11 increasing gradually in length; joint 12 as short as joint 7, the rest again gradually increasing in length, the terminal joint being the longest and slenderest. Head convex above and depressed in front; a slender yellow median line, and behind and within the level of each eye two narrow sulcations, converging behind but not meeting. Median line with a deep sulcus which extends to the extremity of the abdomen, but is interrupted on segments 4–6 of the latter. Pronotum with the transverse sulcus placed before the middle; the upper surface is widened behind, and on each side of the median line is a brown band, curving outwards, on which stand three tubercles, behind the last of which are a few smaller ones, irregularly placed; upper lateral carina convex. Mesonotum rather broader in front than behind, thickly tuberculate for two thirds of its length, and slightly denticulate on the lower lateral carina. Abdominal segments transverse, considerably broader than long, and truncated behind; all except the three terminal ones, which are narrower than the others, laterally sublobate. Cerci pale, very thick, hardly pointed at the tips, about half as long as the last segment, beyond which they project. Legs very short and stout, front and hind femora and tibiae all about as long as the mesonotum, middle ones rather shorter; they are slightly carinated and unarmed; hind femora with several small teeth beneath on the inner carina, and two large subterminal ones on the outer, preceded by some obsolete ones; the median line beneath is also tuberculate. Last joint of tarsi very large, as long as all the rest put together, which are very short, except the first joint of the front tarsi, which is concave above and as long as joints 2–4 together; claws and arolia also very large.

Hab. Australia.

Appears to belong to Stål's genus *Eubulides*, founded on *E. alutaceus*, Stål, from the Philippines, a species I have not seen. In this, however, all the femora are dentated beneath.

Genus EURYCANTHA, Boisd.

Eurycantha Willeyi, sp. n.

Eurycantha horrida, Sharp, Willey, Zool. Results, p. 85, pl. viii. figs. 7-9, pl. ix. figs. 46, 46 a, b (egg) (1898), nec Boisd.

Long. corp. 120-130, lat. pron. 17-20 mm.

Male.—Black; head with two moderate-sized spines wide apart, nearly halfway between the eyes and the occiput, and two smaller ones, nearer together, rather further back; pronotum with 2 large lateral spines in front and 1 behind; mesonotum with 7 or 8 strong lateral spines, the last some distance behind the penultimate one and near the hinder edge; there are also less regular rows of smaller spines below them and on the mesopleura; metanotum and metapleura with large irregular lateral spines, the largest being two about the middle, and another above the hind coxa; segments of the abdomen (except the last) each with 3 strong lateral spines, and with one or two terminal large tubercles at a higher level; segments 7-9 with a short terminal tooth on the median line; upper surface of the body except at the sides spinulose, but with scattered granules; coxæ spined; 4 first femora thickened and with regular but rather widely separated teeth on the carinæ; 4 first tibiæ with 4 or 5 moderately large teeth on each side beneath; hind femora greatly dilated, and with 3 large teeth beneath, the last very large and curved backwards; there are also strong terminal spines on the carinæ beneath; hind tibiæ with 3 large teeth beneath, the middle one double, besides smaller ones towards the base and on each side at the extremity.

Female more ferruginous; the spines smaller, but similarly arranged; the hind femora are much less thickened, and the third spine is not much larger than the others.

Hab. New Britain.

Nearest to *E. calcarata*, Luc., but much less strongly spined. The true *E. horrida*, Boisd., differs from most of the allied forms by the lateral spines on the abdominal segments being smaller and more numerous.

Eurycantha portentosa, sp. n.

Long. corp. 170, lat. mesonoti 22-26 mm.

Female.—Black; antennæ, legs, and under surface inclining to ferruginous; spines arranged nearly as in the last species; much more strongly granulated on the upper surface, and with a transverse row of short spines before the extremity of most of the abdominal segments. There are sometimes

additional small spines between the three larger ones on the sides of each abdominal segment.

Hab. Rossel Island, Louisiade Archipelago.

The largest and broadest species known.

Eurycantha sifa, sp. n.

Long. corp. 104–129, lat. mesonoti 18–20 mm.

Male.—Mahogany-brown, rather shining; head with two large spines behind and rather within the level of the eyes, and two smaller ones behind these, nearer together; sometimes a pair of tubercles nearer the front; pronotum with 2 large lateral spines in front and 1 behind; mesonotum with 2 small central spines on the front edge and about 8 moderate-sized spines on the upper lateral margin, but only 2 or 3 small ones on the mesopleura towards the hinder end; lateral spines of metanotum nearly as in *E. Willeyi*, but more numerous; abdomen with 3 lateral spines on each segment, the first placed rather higher than the others, which stand on a carina on which other rudimentary spines are often placed; upper surface of thorax and abdomen with scattered tubercles; a transverse row of small terminal spines on most of the abdominal segments, best developed on the hinder ones; a distinct median carina on the three segments before the last, rising into a strong spine at the extremity. Legs armed nearly as in *E. Willeyi*; the large spine less curved.

Female darker brown, but otherwise very like the male; mesopleura with more numerous small spines below the larger ones; spines of the metanotum smaller than in the male; abdomen with the hinder half carinated to the extremity; hind femora beneath with 4 or 5 spines (before the terminal ones) of nearly equal length.

Hab. Thursday Island.

Appears to be a common species. Belongs to the group of *E. calcarata*, Luc. Differs from *E. calcarata* in the smaller and less numerous spines, and from *E. Willeyi* (*inter alia*) by the conspicuous pair of spines in front of the mesonotum.

Subfam. XI. *HETEROPTERYGINÆ*.

Genus *HETEROPTERYX*, Gray.

The type of this genus is *Phasma dilatata*, Parkinson, the male of which is, I believe, *Phasma* (*Eurycantha*) *graciosa*, Westw. (not at present represented in the Museum), on which Stål founded his genus *Leocrates*.

Genus HAANIELLA, Kirb., n. n.

|| *Heteropteryx*, Haan; Stål (nec Gray).

Phasma (*Heteropteryx*) *Mülleri*, Haan, may be regarded as the type.

Subfam. XII. *ANISOMORPHINÆ*.

I have no additions to make to this subfamily.

Subfam. XIII. *PRISOPINÆ*.

These peculiar insects differ much from all the others placed by Brunner in his heterogeneous family Phasmidæ, and in some cases the clefts at the end of the tibiæ beneath are very slightly marked.

Genus ACANTHOCLONIA, Stål.

Acanthoclonia (?) *paradoxa*, sp. n.

Female.—Dark brown; antennæ, palpi, and legs clothed with a thick felty pubescence. Head with the upper part much raised, having a trilobate diverging excrescence on each side and a row of three pairs of raised tubercles between; the sides and front of the head are also set with conspicuous tubercles less regularly arranged. The anterior lobes are much larger than the others, and converge in front. Of the antennæ, which incline to reddish towards the end, twenty joints remain; they are cylindrical; the third is the longest, but the remainder increase very gradually in length after the fourth; the scape is broad and flattened, with a raised carina on each side above, and a large lobe below; the second joint is thickened, forming a broad cone. Legs short and stout; femora more or less laminate-dentate on the upper carinæ, the foliations slightly converging above; the tibiæ the same, with several elevations on the front tibiæ and one or two on the others; the outer lower carina of the middle femora is armed with three large teeth. Tibiæ beneath with large terminal triangular clefts. Tarsi with the fifth joint long, the first shorter, and the middle ones very short, decreasing in length. Tegmina rounded, rather longer than broad, extending just beyond the base of the median segment; wings not visible. Lower appendages of the abdomen yellowish.

Dimensions.

	mm.
Long. corporis	61
„ capitis	7
„ pronoti	6
„ mesonoti	10
„ tegminum	7
„ fem. ant.	11

Hab. Santarem, Lower Amazons, March 1896. Taken in the forest by Mr. F. O. Pickard-Cambridge.

The lower carinæ of the thorax and the coxæ are distinctly tuberculate. The thorax is strongly granulated and tuberculate; the prothorax has rows of small tubercles in front, behind, and at the sides; also in the middle, where two are larger and more conspicuous than the others. The mesothorax has three broad obtuse spines on each side of the double median carina, two in front, and the other about the middle. Abdomen with irregular zigzag lines of rugosities, those on the back of the penultimate segment and the one before enclosing long oval spaces.

A very peculiar species, probably belonging to a new genus, which, however, I do not wish to found upon a single specimen, perhaps immature. It is not unlikely to possess wings when fully developed, but it differs conspicuously from *Prisopus* and its allies by the much broader and shorter tegmina.

Subfam. XIV. *PSEUDOPHASMINE.*

Phasmide, pt., Brunner.

Genus *DAJACA*, Brunner.

Brunner proposed this genus for an undescribed Bornean species of which the Museum possesses a specimen, unfortunately in too poor condition to describe.

Genus *OLCYPHIDES*, Griff.

|| *Phocylides*, Stål (nec Pascoe).

Olcypoides iridescens, sp. n.

Long. corp. 73, long. tegm. 6, lat. 3, exp. al. 93, lat. 24 mm.

Female.—Head black below and at the sides as far as the level of the eyes; a black space between the antennæ and a black curve behind the ocelli; antennæ black, the scape greenish, the

joints with narrow pale rings towards the base and at least four broad whitish or green belts beyond; head and pronotum sulcated on the median line; pronotum longer than broad, green above and black below and on the sides, transverse sulcus placed before the middle, behind it on each side is a broad black dash. Mesonotum brownish green above, with a median bright green line; sides and under surface black, the former with two longitudinal yellowish lines. Interalary space greenish; abdomen mahogany-brown, seventh segment reddish, the last three segments varied with green and brown. Abdomen brown beneath, except the operculum, which is green; cerci brown, rather short and thick; legs purplish brown, broadly belted with green. Tegmina green, with the usual hump; extremity truncated, oblique, costa shorter than inner margin. Wings with the costal area of a subhyaline rosy grey, the longitudinal nervures bright green; a purplish-brown costal stripe, narrowly bordered towards the base by yellow on the extreme costal edge, traverses the greater part of the wing. Membranous part of the wing brownish subhyaline, with a very strong coppery iridescence; the nervures green towards the base, and most of the transverse nervules greenish white.

Hab. Trinidad.

Genus IGNACIA, Rehn.

Pseudophasma, Bol.

Ignacia appendiculata, sp. n.

Light brown; antennæ with the two basal joints and more or less of several of the succeeding ones reddish brown, the terminal half of the fourth blackish; head twice as long as broad, with a black band extending backwards from the antennæ, but well within the eyes, over the pro- and mesonotum; pronotum shorter than the head, the sides and the sulcations pale; mesonotum rather longer than the head and pronotum together, and with six long slender filaments rather than spines on the upper surface, black, tipped with pale in the male, and wholly pale in the female; the first pair on the front margin nearly obsolete in the male, the second rather further, and the third about the middle; tegmina brown, with a large, pointed, conical elevation directed towards the base; behind this the colour is yellowish; wings with the costal area light brown; a whitish streak towards the base of the costa, membranous portion greyish subhyaline; legs long and slender, all the femora clavate towards the extremity, and the front femora much waved.

Dimensions.

	♂. mm.	♀. mm.
Long. corp.	53	71
„ tegm.	6	10
Exp. al.	64	102
Long. fem. ant.	18	22

Hab. Nauta (*Degand*).

Described from one male and one female, both in rather poor condition.

Genus PSEUDOPHASMA, Kirb.

Pseudophasma inca, sp. n.

Male.—Black; head scarcely broader than long, pronotum half as long again as broad, granulated, speckled with yellowish, and with the lateral carina narrowly yellowish; a deep oblique depression before each of the front angles; mesonotum granulated with yellowish, metanotum and base of abdomen rufous above; tegmina broadly oval, the costa greatly arched, reticulated with yellow, the intermediate space brown, and a large, black, obliquely oval spot before the extremity. Costal area of wings dark brown, yellowish, and with yellowish transverse nervures towards the base; membranous area smoky hyaline.

Female.—Upper surface of head, pro- and mesonotum brown, bounded by the black colour of the sides; tegmina with the black blotch much larger, curving round to the base; area behind uniform light brown. Costal area of wings light brown, mottled with darker; base pale; metanotum with borders and sutures varied with yellow, and basal segments of abdomen indistinctly marked with yellow. Antennæ black, banded in the female only with ferruginous towards the extremity.

Dimensions.

	♂. mm.	♀. mm.
Long. corp.	47	77
„ mesonoti	5	6
Exp. al.	70	122

Hab. Palcazu, Peru.

A fine species, belonging to the same group as *P. phthisicum*, Linn.; but in that species the tegmina are much raised, and the femora are reddish at the base.

Pseudophasma Cambridgei, sp. n.

Female.—Head broader than long, testaceous, with a narrow brown carina above, expanding and ceasing in a small triangular spot between the antennæ; the sides of the head nearly to the level of the upper part of the eyes are black; face testaceous, a transverse reddish mark in front below the level of the antennæ; palpi reddish brown, the inner side and terminal joint more yellow. The antennæ are finely ciliated (18 joints remain), testaceous yellow to the eleventh joint and then black, with pale rings towards the base of the twelfth segment, and on the extremity and base of the fourteenth and fifteenth and sixteenth and seventeenth respectively, and at the tip of the eighteenth. The scape, second joint, and base of the third are thickened; the third is nearly as long as the fourth and fifth together, the fifth being the shortest, the rest gradually lengthening, though the eighteenth is a little shorter than the preceding; all the joints beyond the second are long and cylindrical. Prothorax and mesothorax testaceous above, with a median groove; the thorax, below the lateral carinæ, and the abdomen are black. The hinder two-fifths of the mesothorax is raised; the front part is bordered on the lateral carinæ with a row of short sharp spines, the flat space between being sparingly and irregularly granulated. The tegulæ are humped, strongly reticulated, and testaceous yellow inside to the summit of the hump, and black outside. The wings are dark reddish brown on the costal area and greyish brown on the membranous area. The legs are testaceous, the femora black, testaceous at the tips beneath on the first four femora, and wholly so beneath on the hind femora. The trochanters and coxæ are wholly blackish. The terminal segments of the abdomen are carinated above and provided with a deep pouch below; the cerci are short, thick, and obtuse. The legs are long and slender, the middle legs shortest.

Dimensions.

	mm.
Long. corporis	53
" capitis	4
" pronoti	3½
" mesonoti	8
Exp. al.	57
Long. fem. ant.	20

Hab. Forest, Santarem, Lower Amazons, March 1896.

Closely allied to *Phasma putidum*, Bates (also from Santarem), but differing in the colour of the antennæ, the prickles on the thorax, &c.

A single specimen only, taken by Mr. F. O. Pickard-Cambridge.

Subfam. XV. *ASCHIPASMINÆ*.

Subfam. XVI. *PHYLLINÆ*.

I have no additions to make to these subfamilies. The genus *Aschipasma*, Westw., is often misspelt *Aschiphasma*.

LII.—*Diagnoses of Three new Species of Barbus from Lake Victoria.* By G. A. BOULENGER, F.R.S.

Barbus nummifer.

D. III 8. A. III 5. L. lat. 37–39. L. tr. $\frac{5\frac{1}{2}-6\frac{1}{2}}{6\frac{1}{2}}$.

Depth of body $3\frac{1}{2}$ to 4 times in total length, length of head $4\frac{1}{3}$ to $4\frac{1}{2}$ times. Snout rounded, as long as eye, which is $3\frac{2}{3}$ to 4 times in length of head; interorbital width $2\frac{1}{3}$ to $2\frac{2}{3}$ times in length of head; lips feebly developed, interrupted on the chin; barbels 2 on each side, anterior as long as eye or a little shorter, posterior $1\frac{1}{4}$ to $1\frac{1}{2}$ diameters of eye. Last simple ray of dorsal very strong, bony, not serrated, as long as head. Ventrals below origin of dorsal. Caudal peduncle $1\frac{3}{4}$ to twice as long as deep. 4 scales between lateral line and root of ventral. A series of 3 to 6 round blackish spots on each side.

Total length 130 mm.

Several specimens.

Barbus macropristis.

D. III 7. A. III 5. L. lat. 39. L. tr. $\frac{6\frac{1}{2}-7\frac{1}{2}}{5\frac{1}{2}}$.

Depth of body equal to length of head, 4 times in total length. Snout rounded, $3\frac{1}{2}$ to 4 times in length of head; diameter of eye 4 to $4\frac{1}{2}$ times in length of head, interorbital width $2\frac{3}{4}$ times; lips feebly developed; barbels 2 on each side, anterior $\frac{1}{2}$ diameter of eye, posterior as long as eye. Last simple ray of dorsal very strong, bony, strongly serrated behind, nearly as long as or a little longer than head. Ventrals entirely in advance of dorsal. Caudal peduncle twice as